

EARLY BIRD WEEKLY



NewbergRotaryEarlybirds.org

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Last week was [Tiger Manufacturing](#), presented by this year's CEO, Max Davidson, and lathe programmer Jacob McAdoo with assistance from their mentor, Alvin Elbert, President of A.R.E. Manufacturing down on Springbrook Rd.

This year, as student CEO, Max learned invoicing with QuickBooks and Purchase Order management from the ERP that A.R.E. Manufacturing subscribes to, ProShop, donated to the students' Tiger Mfg business by [ProShop](#). This year's projects have been re-orders but prior year students have had to build quotes.

Tiger Manufacturing, as defined in the [A.R.E.'s dedicated page](#), is: "... a student-run machine shop, fully functioning at Newberg High School. Our students machine real parts, for real customers for real paychecks. We educate students while efficiently and effectively manufacturing high quality machined components."

The student business bills about \$30,000/yr of which \$19,000 was considered profit.

The students produce mostly simple parts that can be lathed or cast, mostly out of aluminum, steel, and sometimes plastics. They are taught how to create and load CNC programs by industry mentors.

A.R.E. selects jobs that set the students up for success and with turn times that support the extra time needed for a manufacturing firm that works 1.5 hours a day (class schedule).

The students are given blueprints and

purchase orders. To prepare for manufacture they start by reviewing old programs and G&M Codes. For those of us that don't know these industry acronyms (thanks for asking, John Bridges).

In the functions of CNC machining, G Codes represent action, telling the machine how and where to move. M Codes turn actions on or off.

CNC is Computer Numerical Control that drives machining tools and there are way [more than just G&M Codes](#). Those are just prevalent.

The mentors how the x and z axes work and how those codes and their connected tools work in manufacturing and engineering.

Before Tiger, Max had had some machine shop classes with basic manual machining on a single axis lathe. Jacob had been an employee at A.R.E. so had some basic knowledge before Tiger.

How does Tiger Mfg benefit students? They learn money management and perform employment interviews on the next year's crops of students, many of whom have never held a "real" job.

The foundational support and knowledge by real world mentors is invaluable. Most students have to do trade school or on the job training to earn the skills picked up on Tiger's program.

Big news this year is that the current shop is being torn down the day after school ends to make way for a new structure in 2023, one

of the reasons we passed the school bond in recent election cycle. The new structure will still be in construction for the next school year so Tiger will be off-campus for a year.

They're wanting to equip the new facility with updated machining equipment, including an [LM-200M](#), multi-axis horizontal turret lathe with milling, from Takisawa for about \$97,000.

Alvin says that if a student can master the LM-200M, they can work anywhere.

Our foundation took a nibble out of that with a \$10,000 check from the Early Bird Foundation (left, with Doug Caffall).

Tiger is also heavily funded by A-dec, the Austin Family Foundation and the Gene Haas Foundation

Most of Tiger's marketing is done by NHS' machine shop teacher, Patrick Verdun, mostly via [Instagram](#).

Tiger's origin only goes back five years to when Terry Coss was still teaching (he served us for 33 years). Alvin had seen an article about a Wisconsin high school with a business-like manufacturing program. "We could do that!"

He was given inspiration from now-Mayor, Rick Rogers and one of the high school counselors really latched on to the idea.

From there they identified rooms being used for storing "junk" that filled eight 4'x4'x4' bins and launched in a second semester with four students.

It was the counselor's idea to treat the students like actual workers and pay a formal minimum wage.



By the way, the prior week's Exchange Student Bake Sale and Ceramics Auction netted \$429 toward their \$1,000 target for purchasing a [Shelter Box](#). They're still collecting cans and bottles and may return with more baked goods.